

Table B40. Cooling Equipment, Number of Buildings for Non-Mall Buildings, 2003

	Number of Buildings (thousand)									
	All Buildings*	Cooled Buildings	Cooling Equipment (more than one may apply)							
			Residential-Type Central Air Conditioners	Heat Pumps	Individual Air Conditioners	District Chilled Water	Central Chillers	Packaged Air Conditioning Units	Swamp Coolers	Other
All Buildings*	4,645	3,625	1,006	492	742	33	111	1,613	122	40
Building Floorspace (Square Feet)										
1,001 to 5,000	2,552	1,841	581	260	383	Q	Q	678	58	Q
5,001 to 10,000	889	732	207	78	134	Q	Q	367	26	Q
10,001 to 25,000	738	629	140	87	114	Q	26	332	26	Q
25,001 to 50,000	241	216	47	33	62	6	19	119	Q	Q
50,001 to 100,000	129	118	19	20	27	5	24	67	Q	Q
100,001 to 200,000	65	60	8	8	16	6	17	32	Q	Q
200,001 to 500,000	25	23	4	4	4	2	10	13	Q	Q
Over 500,000	7	6	1	1	1	1	3	3	Q	Q
Principal Building Activity										
Education	386	352	59	63	87	14	36	139	Q	Q
Food Sales	226	210	36	Q	Q	N	N	107	Q	Q
Food Service	297	283	69	30	33	Q	Q	176	Q	Q
Health Care	129	129	47	22	8	1	8	57	Q	Q
Inpatient	8	8	1	Q	3	1	4	5	Q	Q
Outpatient	121	121	46	19	Q	Q	4	52	N	N
Lodging	142	130	23	25	71	Q	11	39	Q	Q
Retail (Other Than Mall).....	443	406	95	50	82	Q	Q	200	Q	Q
Office	824	790	273	107	107	9	29	339	Q	15
Public Assembly	277	213	63	27	40	3	6	96	Q	Q
Public Order and Safety	71	61	Q	Q	20	Q	Q	27	Q	N
Religious Worship	370	308	102	57	74	Q	Q	138	Q	Q
Service	622	370	97	33	116	N	Q	136	Q	N
Warehouse and Storage	597	266	91	28	48	Q	Q	113	Q	Q
Other	79	57	Q	Q	Q	Q	4	27	Q	Q
Vacant	182	52	Q	Q	Q	Q	Q	18	Q	N
Year Constructed										
Before 1920	330	232	83	Q	82	Q	4	81	Q	Q
1920 to 1945	527	382	135	36	109	Q	8	147	Q	Q
1946 to 1959	562	430	115	48	124	4	11	180	Q	Q
1960 to 1969	579	467	112	50	130	4	22	201	Q	Q
1970 to 1979	731	609	157	77	121	5	24	294	35	Q
1980 to 1989	707	577	165	105	90	5	19	251	18	Q
1990 to 1999	876	695	184	122	72	8	16	334	19	Q
2000 to 2003	334	234	55	46	14	Q	8	125	Q	Q
Census Region										
Northeast	726	519	144	59	179	6	10	202	Q	Q
Midwest	1,266	957	363	49	209	4	29	425	Q	10
South	1,775	1,479	360	303	229	14	50	681	Q	12
West	878	671	138	81	125	9	22	304	113	Q
Climate Zone: 30-Year Average										
Under 2,000 CDD and --										
More than 7,000 HDD	855	578	192	30	139	3	16	261	30	Q
5,500-7,000 HDD	1,173	882	241	81	226	4	27	374	Q	13
4,000-5,499 HDD	673	582	191	88	142	7	21	224	Q	Q
Fewer than 4,000 HDD	1,276	1,003	225	205	156	10	22	488	40	Q
2,000 CDD or More and --										
Fewer than 4,000 HDD	669	580	158	89	79	9	25	266	Q	Q

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			Residential-Type Central Air Conditioners	Heat Pumps	Individual Air Conditioners	District Chilled Water	Central Chillers	Packaged Air Conditioning Units	Swamp Coolers	Other
All Buildings*	4,645	3,625	1,006	492	742	33	111	1,613	122	40
Number of Floors										
One	3,136	2,340	623	344	418	10	24	1,061	73	Q
Two	1,031	864	264	103	185	6	30	384	38	16
Three	339	290	96	32	88	4	24	119	Q	Q
Four to Nine	128	120	22	10	48	11	25	44	Q	Q
Ten or More	12	12	1	3	3	1	7	5	Q	Q
Number of Workers (main shift)										
Fewer than 5	2,653	1,746	508	257	428	Q	Q	619	64	Q
5 to 9	778	725	240	89	110	Q	Q	345	Q	Q
10 to 19	563	523	146	57	93	Q	10	274	Q	Q
20 to 49	398	386	81	47	68	6	29	223	21	Q
50 to 99	147	139	19	22	25	7	20	92	Q	Q
100 to 249	77	76	9	15	14	6	22	44	Q	Q
250 or More	30	30	2	5	4	4	14	16	Q	1
Weekly Operating Hours										
Fewer than 40	1,002	595	198	104	125	Q	7	206	Q	Q
40 to 48	1,117	951	283	128	209	Q	21	384	24	Q
49 to 60	1,062	883	262	107	169	6	33	395	29	Q
61 to 84	591	521	136	68	90	6	18	248	Q	Q
85 to 167	400	338	56	28	46	7	9	222	Q	Q
Open Continuously	475	338	70	58	103	4	23	158	15	Q
Multibuilding Facility										
Not Part of a Multibuilding										
Facility	3,169	2,595	773	299	511	Q	50	1,207	85	18
College or University	83	73	Q	11	11	15	20	12	Q	Q
Primary or Secondary School	254	218	22	46	53	Q	18	87	Q	Q
Office Complex	111	104	32	21	Q	Q	3	43	Q	Q
Retail Complex	151	92	Q	Q	Q	N	Q	42	Q	Q
Religious Campus or Complex	195	171	50	35	39	Q	Q	78	Q	Q
Health Care Complex	39	39	12	7	6	1	6	20	Q	Q
Lodging or Resort Complex	61	58	Q	9	26	Q	Q	14	Q	Q
Government Complex	87	62	Q	Q	17	Q	5	27	Q	Q
Other	496	214	58	39	45	Q	2	84	Q	Q

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			Residential-Type Central Air Conditioners	Heat Pumps	Individual Air Conditioners	District Chilled Water	Central Chillers	Packaged Air Conditioning Units	Swamp Coolers	Other
All Buildings*	4,645	3,625	1,006	492	742	33	111	1,613	122	40
Renovations in Buildings Constructed Before 1980 (more than one may apply)										
Any Type of Renovation										
Since 1980	1,018	872	243	107	236	7	40	399	35	8
Addition or Annex	256	242	79	34	75	2	12	117	Q	Q
Reduction In Floorspace	22	22	Q	Q	Q	Q	2	12	Q	Q
Cosmetic Improvements	741	644	172	81	170	5	29	321	22	6
Wall or Roof Replacement	370	309	84	37	84	2	14	145	Q	Q
Interior Wall										
Re-Configuration	411	362	96	36	97	4	20	176	Q	Q
HVAC Equipment Upgrade	442	405	116	56	98	4	28	206	16	Q
Lighting Upgrade	455	396	109	49	103	6	24	196	17	Q
Window Replacement	310	259	78	30	85	Q	11	123	Q	Q
Plumbing System Upgrade	315	271	74	31	81	2	12	124	Q	Q
Insulation Upgrade	227	187	68	19	50	Q	7	67	Q	Q
Other Renovation	19	17	Q	Q	Q	N	Q	Q	Q	N
No Renovations Since 1980	1,710	1,248	359	113	331	11	29	504	46	Q
Building Newer than 1980	1,917	1,506	404	273	175	14	42	710	41	16
Energy Sources (more than one may apply)										
Electricity	4,404	3,623	1,006	492	742	33	111	1,613	122	37
Natural Gas	2,391	2,153	652	176	392	17	78	1,116	78	16
Fuel Oil	451	298	82	21	132	3	27	116	10	6
District Heat	67	55	Q	2	13	25	15	8	Q	Q
District Chilled Water	33	33	Q	1	2	33	Q	4	Q	Q
Propane	502	399	118	39	139	Q	7	149	28	Q
Other	132	78	16	Q	24	Q	Q	32	Q	Q
Cooling Energy Sources (more than one may apply)										
Electricity	3,589	3,589	1,005	492	742	9	106	1,612	122	30
Natural Gas	17	17	Q	8	Q	Q	5	4	Q	Q
District Chilled Water	33	33	Q	1	2	33	Q	4	Q	Q
Energy End Uses (more than one may apply)										
Buildings with Space Heating	3,982	3,469	963	481	718	32	106	1,539	103	39
Buildings with Cooling	3,625	3,625	1,006	492	742	33	111	1,613	122	40
Buildings with Water Heating	3,472	3,112	868	406	631	31	109	1,430	115	33
Buildings with Cooking	801	743	172	103	166	6	41	417	41	8
Buildings with Manufacturing	119	92	26	12	19	Q	Q	45	Q	Q
Buildings with Electricity										
Generation	149	144	41	24	33	5	30	76	5	4
Percent of Floorspace Cooled										
Not Cooled	1,020	N	N	N	N	N	N	N	N	N
1 to 50	985	985	284	76	349	Q	9	348	36	Q
51 to 99	629	629	182	82	119	5	31	313	43	Q
100	2,011	2,011	540	335	274	27	72	952	43	22

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			Residential-Type Central Air Conditioners	Heat Pumps	Individual Air Conditioners	District Chilled Water	Central Chillers	Packaged Air Conditioning Units	Swamp Coolers	Other
All Buildings*	4,645	3,625	1,006	492	742	33	111	1,613	122	40
Heating Equipment (more than one may apply)										
Heat Pumps	476	469	36	448	41	Q	11	68	Q	Q
Packaged Heat Pumps	278	275	15	263	23	Q	6	50	Q	Q
Split-System Heat Pumps	166	163	25	154	18	Q	3	16	Q	Q
Individual Room Heat Pumps	58	58	6	57	10	Q	5	14	Q	Q
Furnaces	1,864	1,581	675	85	302	Q	9	689	65	Q
Individual Space Heaters	819	685	171	57	321	Q	12	255	36	Q
District Heat	65	53	Q	2	12	24	14	7	Q	Q
Boilers	579	485	127	39	169	5	73	207	22	9
Packaged Heating Units	953	932	184	51	102	5	20	738	16	Q
Other	205	154	29	16	47	Q	10	55	Q	Q
Cooling Equipment (more than one may apply)										
Residential-Type Central										
Air Conditioners	1,006	1,006	1,006	31	99	Q	9	64	12	Q
Heat Pumps	492	492	31	492	39	1	13	61	Q	Q
Packaged Heat Pumps	288	288	11	288	21	Q	7	43	Q	Q
Split-System Heat Pumps	174	174	24	174	18	Q	4	15	Q	Q
Individual Room Heat Pumps	58	58	6	58	9	Q	5	14	Q	Q
Individual Air Conditioners	742	742	99	39	742	2	16	153	21	Q
District Chilled Water	33	33	Q	1	2	33	Q	4	Q	Q
Central Chillers	111	111	9	13	16	Q	111	22	Q	Q
Packaged Air Conditioning										
Units	1,613	1,613	64	61	153	4	22	1,613	34	8
Swamp Coolers	122	122	12	Q	21	Q	Q	34	122	Q
Other	40	40	Q	Q	Q	Q	Q	8	Q	40
Main Equipment Replaced Since 1990 (more than one may apply)										
Heating	1,197	1,054	314	145	241	Q	28	475	25	Q
Cooling	1,356	1,356	386	158	373	Q	36	573	54	Q
Lighting Equipment Types (more than one may apply)										
Incandescent	2,184	1,875	580	239	455	17	73	827	61	20
Standard Fluorescent	3,943	3,408	942	460	694	29	107	1,540	120	37
Compact Fluorescent	941	864	227	127	188	17	66	423	29	10
High Intensity Discharge	455	400	105	68	85	10	33	202	17	5
Halogen	565	504	139	85	112	4	34	263	22	10
Other	8	8	Q	Q	Q	Q	Q	Q	N	N
HVAC Conservation Features (more than one may apply)										
Variable Air-Volume System	466	450	101	56	47	20	56	245	18	10
Economizer Cycle	508	508	82	72	50	18	62	326	33	5
HVAC Maintenance	2,581	2,328	625	338	368	32	104	1,157	91	26
Energy Management and Control System (EMCS)	252	248	31	51	29	17	51	117	Q	5

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	All Build-ings*	Cooled Build-ings	Cooling Equipment (more than one may apply)							
			Resid-entia-Type Central Air Condi-tioners	Heat Pumps	Indiv-idual Air Condi-tioners	District Chilled Water	Central Chillers	Pack-aged Air Condi-tioning Units	Swamp Coolers	Other
All Buildings*	4,645	3,625	1,006	492	742	33	111	1,613	122	40
Equipment Usage Reduced When Building Not In Full Use (more than one may apply)^a										
Heating	2,878	2,512	692	346	515	18	70	1,135	79	22
Cooling	2,761	2,761	760	359	596	20	73	1,241	98	18
Lighting	3,685	3,122	891	412	606	25	81	1,390	103	27
Office Equipment	1,504	1,367	432	181	272	11	35	582	27	Q

See "Guide to the Tables" or "Glossary" for further explanations of the terms used in this table. Both can be accessed from the CBECS web site - <http://www.eia.doe.gov/emeu/cbecs>.

* Figures in this table do not include enclosed malls and strip malls. Mall buildings add an estimated 213 thousand buildings comprising 6.9 billion square feet.

^a The definition for one or more of these row items has changed and may not be directly comparable with past CBECS estimates. See "Guide to the Tables" for discussion of the differences.

Q=Data withheld because the Relative Standard Error (RSE) was greater than 50 percent, or fewer than 20 buildings were sampled.

N=No responding cases in sample.

Notes: • HVAC = Heating, Ventilation, and Air Conditioning. • Due to rounding, data may not sum to totals.

Source: Energy Information Administration, Office of Energy Markets and End Use, Form EIA-871A of the 2003 Commercial Buildings Energy Consumption Survey.